

Descriptions of Moths new to Japan, collected by Messrs. Lewis and Pryer; by ARTHUR G. BUTLER, F.L.S., F.Z.S., &c.

The species here described are the pick of Mr. George Lewis's collection of moths, combined with a fairly large series sent home recently for identification by Mr. H. Pryer.

Although it is not considered a correct thing to look a gift-horse in the mouth, I must express a wish that Mr. Pryer had not sent me his most dilapidated specimens for identification; the study of the *Heterocera* is sufficiently difficult in the case of good specimens, but when not merely half the pattern and colouring is missing, but the head and sometimes also the legs and abdomen, the chances against the identification of a moth are greatly increased if not entirely annihilated.

SPHINGIDÆ.

1. *Sphinx constricta*, n. sp.

Allied to *S. ligustri*, of Europe, decidedly smaller, wings much narrower and more elongated, so as to more nearly resemble *S. Kalmia* of the United States; much darker than *S. ligustri*, the paler areas being of a deep copper-brown colour (excepting the white sub-marginal lines), the darker area greyish-black, traversed by velvet-black lines; secondaries agreeing with those of *S. Kalmia*, in having no sub-basal band and the outer border somewhat dark, but differing from it and *S. ligustri* in the much greater width of the central band towards the abdominal margin, and from *S. ligustri* in the much wider submarginal black band; body and under-surface almost the same as in the latter species. Expanse of wings 76 mm.

Kashiwagi, 22nd June, 1881 (G. Lewis).

2. *Ambulyx ochracea*, n. sp.

Allied to *A. auripennis*, of Ceylon; ochreous, with a faint pink flush; primaries narrow and elongated, as in the American *A. strigilis*; markings most like those of *A. consanguis*, but much

less distinct; on the costal borders of primaries a short olivaceous dash near the base followed by a pale-edged almost semi-circular spot upon the margin; a diffused spot or streak before the middle and five oblique streaks crossing the sub-costal vein beyond the cell; a blackish disco-cellular spot; extremely faint and interrupted indications of two irregular central lines; a blackish dot below the base of the cell; a large bilobed pale-edged olivaceous spot upon the inner margin near the base; a rounded olivaceous spot beyond the middle of first median interspace and resting upon the first median branch, and below this a reddish-brown patch enclosing a crescent of the ground-colour; external border dull chocolate-brown, tapering at the extremities; secondaries with an abbreviated oblique grey central stripe, from the radial to the sub-median vein; a darker sub-anal stripe with a clavate streak of the same colour below it; apical area speckled with dark rust-brown; outer border narrowly of the same colour, excepting towards anal angle, where it is sandy-yellowish; thorax with a golden-olivaceous cuneiform patch on the tegulae, apparently confluent with a quadrate patch on each side of the metathorax, this patch is divided obliquely, the front part being olivaceous and the back part rich olive-brown, with a whitish crescent in front partly separating the two colours; a broad band of chocolate-brown between the antennae; fifth segment of abdomen with an olive-green spot on each side; anal segment with a golden-olive dorsal spot and lateral testaceous tufts; under-surface of wings, especially of the secondaries, much paler than above, primaries with the external border ash-grey, with brown inner edge; body below more golden than above, the base of palpi and front of pectus reddish. Expanse of wings 35 mm.

Nikko (H. Pryer).

ARCTIDE.

3. *Estigmene mærens*, n. sp.

Allied to *E. luctifera*, of Europe, but the primaries narrower, less opaque, blacker at the base; secondaries paler, smoky-brown, without a trace of the orange anal spot or patch; abdomen with all the black spots large, those of the dorsal series confluent. Expanse of wings 91 mm.

Yokohama (H. Pryer).

Epatolmis japonica, of Walker from Japan, is the true *E. luctifera*; it was unset when described.

4. *Seirarctia lewisii*, n. sp.

Wings above creamy-white; a black streak commencing at the base, running above the median vein to the end of the cell and thence forking to outer margin, the upper ramus being oblique, extending to apex and divided by the yellowish veins; a spot at the end of the cell divided by the upper discocellular veinlet; a costal patch towards apex divided by the sub-costal branches; a broken streak divided by the first median branch, an internal streak extending almost to the base and divided by the sub-median vein; also two small acutely conical spots at centre of outer margin; secondaries with blackish discocellulars; head and tegulae creamy-white; collar and abdomen rose-red, the latter with dorsal and lateral series of black spots; antennae and palpi black; thorax dark brown; base of abdomen clothed with whitish hair; markings of wings below paler than above; body cream-coloured, legs brownish, venter with lateral black spots. Expanse of wings 48 mm.

Japan (Lewis).

LITHOSIIDÆ.

5. *Ghoria collitoides*, n. sp.

♂ Aspect of the species of *Collita* (*C. gigantea*, Oberth.), but neururation of *Ghoria*; primaries fuliginous grey-brown, with bronze reflections; costal border bright straw-yellow; secondaries fuliginous grey; face fuliginous grey-brown; vertex of head blackish; collar reddish-orange; thorax dark fuliginous grey-brown; abdomen grey; under-surface dove-grey; primaries with costal borders as above; pectus ochreous-yellow; legs and venter grey; anus ochreous. Expanse of wings 41–45 mm.

♂, ♀ Nikko (Lewis and Pryer).

The female is paler than the male.

6. *Katha aprica*, n. sp.

Near to *K. brevipennis*, of Ceylon; primaries above bright clear ochreous; secondaries paler ochreous, less pale along the external border than on the remainder of the wing; head, thorax and anal segments of abdomen bright ochreous, remainder of abdomen pale greyish-ochreous; under surface of wings pale ochreous, the primaries very faintly tinted with greyish; interno-median fold very prominent, so that it looks like a dark grey line when seen without a lens; body below and legs greyish-testaceous, sides of venter ochreous. Expanse of wings 30 mm.

Ohoyama (H. Pryer).

Mr. Pryer, judging solely by external facies, supposes this to be *Systropha aureola*: contrary to the experience of all Lepidopterists, he holds that in a butterfly or moth there are other characters of equal importance to neuriation; he does not indeed attempt to point out what these characters are, nor does he explain upon what grounds he proposes to transfer genera from the families to which their entire structure proves them to belong, to others which they only vaguely resemble; he simply hints that because in other orders (as *Neuroptera*) the veinlets on opposite wings of the same individual differ in number and shape, neuriation should not be relied upon in *Lepidoptera*!

Judging, therefore, entirely by external facies, Mr. Pryer naturally fails to recognize the species and even the genus of the slightest varietal departure from the normal type, even of the best known species; thus he sends me for identification a worn specimen of a *Xylophasia* (probably a slightly dark variety of *X. polyodon*, from which it barely differs on either surface) and on referring to his list I find it placed in the family *Hadenidæ*! and with the following note:—"I am puzzled where to place this, as it resembles, perhaps superficially, both *Xylophasia* and *Apamea*;" guessing, apart from systematic study, is generally a failure; nearly all the blunders made by describers are due to it, and probably all of those made by field naturalists like my excellent, but too confident, friend and correspondent, who, without any knowledge of structural distinctions, disputes the authority of such men as Felder, Guénée, Lederer, Moore and others, under the flimsy pretence of correcting the errors of Mr. Butler.

7. *Mittochrista bivittata*, n. sp.

Allied to *M. aberrans*, much smaller; primaries bright rose-red; three elongated black dots near the base in an angular series; an interrupted angulated black line from costa to submedian vein just before the basal third, a black dot at the inferior angle of the cell, an angulated and acutely dentated black discal line before the external third, and beyond this a series of seven small elongated black dots; fringe golden testaceous; secondaries pale rose-pink with fringe a little paler than in the primaries; head and thorax ochreous, abdomen white

brown; wings below rose-coloured; primaries with three elongated sub-apical black dots; fringes as above, body creamy-yellowish. Expanse of wings 21 mm.

Niigata, 9th September, 1881 (G. Lewis).

This is readily distinguishable from *M. aberrans* by the single angulated line before basal third of primaries, instead of the two crossed lines and the more slender denticulated discal line.

8. *Nola microphasma*, n. sp.

♂ Primaries pale silver-grey, with little longitudinal black dashes along the costa and at the extremities of the veins; two more on the costal vein towards the base; three black spots in an oblique series just before basal third; a slightly arched post-median oblique series of little black dashes on the veins, and a second series about half way between the latter and the outer margin; fringe very long, its basal half white, with a series of well defined grey spots; its external half pale grey, bounded internally by a darker line; secondaries silvery-white, fringe slightly spotted with greyish at apex; body grey; antennæ white, broadly, but delicately, pectinated; wings below silvery-white, primaries, costa, and fringe of secondaries slightly greyish, with faint golden reflections; body below whity-brown, sericeous. Expanse of wings 16 mm.

Yokohama (H. Pryer).

I believe this to be the male of a somewhat rubbed *Nola* which was in Mr. Jonas's collection; the latter is, however, greyer in colour.

LIPARIDÆ.

9. *Lælia gigantea*, n. sp.

♂ Allied to *L. cænosa*, but considerably larger, the primaries cream-coloured, without smoky clouding or streaking, but with the same irregularly angulated row of six black spots across the disc; secondaries whiter; thorax cream-coloured; head ochreous in front instead of sordid white; legs white instead of yellow and grey; abdomen and under-surface white. Expanse of wings 52 mm.

Yokohama (H. Pryer).

10. *Artaxa conspersa*, n. sp.

Primaries above ochreous, the basal two-thirds sprinkled with

black atoms, with the exceptions of a pale angular band just before the basal third; the speckled area also bounded externally by a second band scarcely paler than the ground colour; two black sub-apical spots as in *A. digramma*; secondaries of a deeper ochreous tint than the primaries and slightly sordid, excepting upon the external and costal borders; thorax pale ochreous, abdomen slightly darker; under-surface pale creamy-ochreous; primaries with white internal border, basal three-fourths of the wing suffused with pale brownish. Expanse of wings 36 mm.

Yokohama (H. Pryer).

11. *Porthetria eurydice*, n. sp.

Primaries above olive-brown; basal two-fifths confusedly banded with black; a dusky discocellur lunule; a black sub-apical semicircle upon the costa, and an interrupted discal series of seven black spots; secondaries black-brown, almost black; body blackish, antennæ and tegulæ olive-brown; wings below blackish-brown, primaries with the apical third sandy testaceous, showing some of the black spots of the upper surface; body below sandy-brown. Expanse of wings 40 mm.

Ohoyama (H. Pryer).

About the most sombre species in the genus.

12. *Calliteara pseudabietis*, n. sp.

♂ Primaries above greyish-white, with faint indications of the markings of *C. abietis* as follows:—base silvery-white, bounded by a slightly zigzag abbreviated blackish line; no orbicular spot, but an oblique reniform black-edged spot upon a grey irregular central belt partly edged with blackish; a sub-apical black dot; a sub-marginal series of black dots, and an imperfect series of blackish spots on the fringe; secondaries sericeous greyish, with whitish abdominal border and grey-spotted white fringe; body above sordid white with dorsal blackish spots; antennæ with reddish pectinations; under-surface white; wings with black discocellular spots; primaries with greyish discoidal area; palpi black at the sides; legs spotted with black. Expanse of wings 50 mm.

Nikko, 16th August, 1881 (G. Lewis).

The form of the primaries in this species is that of *C. abietis* ♀, it is also nearly as pale as and much less distinctly marked than that sex; it should follow *C. argentata*.

13. *Dasychira pryeri*, n. sp.

♀ White, sericeous; primaries above rather closely irrorated with black scales; a nearly straight black line across the basal third and an abbreviated transverse sub-sigmoidal black line nearly half way between the cell and apical margin; antennæ with testaceous pectinations; secondaries below with a conical grey discocellular spot. Expanse of wings 53 mm.

Yokohama (H. Pryer).

14. *Nerice bipartita*, n. sp.

♂ Allied to *N. bidentata* and *N. davidi*; the colouring similar, but the primaries equally divided into chocolate-brown and whitish, the apical costal half being brown, darkest along its posterior edge, the interno-basal half whity-brown towards inner margin, but getting silvery-white along its anterior edge, interrupted however beyond the middle by a nearly quadrangular red-brown patch; secondaries greyish-brown; head and thorax dark brown, tegulæ white; abdomen grey-brown; under-surface pale pinky-brown, the body darker than the wings. Expanse of wings 41 mm.

Sapporo (G. Lewis); Nikko and Yezo (H. Pryer).

LASIOCAMPIDÆ.

15. *Chrostogastria brevivenis*, n. sp.

♂ Structure of *C. pruni*, excepting that the sub-costal furca of primaries is much shorter; the margins of the wings not undulated; upper-surface copper-red, more golden towards base of primaries below the median vein; the disc somewhat paler than the rest of the wing, bounded internally and traversed by two slightly arched darker lines; a large oval silver-white spot at the end of the cell, and therefore before the middle of the wing; tegulæ golden-cupreous; under surface paler than above, with the exception of the head, palpi, antennæ, front of pectus, and anterior legs, which are dark red-brown; the inner discal line of primaries widened and carried across the secondaries. Expanse of wings 41 mm.

Nikko (H. Pryer).

PHALERIDÆ.

MICROPHALERA, n. gen.

Aspect of *Hyperæschra*, but with almost the neururation of *Phalera*; it differs from the latter as follows:—primaries with

five true sub-costal branches, the second (which forms the upper ramus of the sub-costal furca) being again forked close to apex; the upper radial emitted from the anterior angle of the cell instead of from the posterior margin of the sub-costal vein; the second and third median branches in all the wings well separated at their origins instead of being emitted from one point; the antennæ also are shorter, are narrowly pectinated instead of penicillate, and the palpi are very small and porrected; the legs are very imperfect in the type, but they are clearly not covered with the long woolly hair of a *Phalera*.

16. *Microphalera grisea*, n. sp.

Primaries white, varied with pale testaceous, and irrorated with black scales, which give the wings a greyish appearance; central area bounded upon the costa by two pairs of oblique black dashes, the second and third, or two inner dashes forming the commencement of two irregularly dentate-sinuate white-bordered dusky lines, which approach one another below the median vein; a longitudinal black dash in the cell and four others placed in a zigzag arrangement upon the disc beyond the cell; a very indistinct dusky third line parallel to the second dentate-sinuate line and dotted upon the veins with black, across the lower half of the disc; a marginal series of black dots followed by dusky spots on the fringe; secondaries sordid white, slightly pearly, and with a tolerably broad irregular pale brownish-grey external border; fringe spotted with whitish; thorax white, irrorated with black; abdomen brown; under-surface pale brown; costa and external half of primaries and body darker and of a more coppery colour; fringes of wings dark brown, spotted with white. Expanse of wings 41 mm.

Yezo (H. Pryer).

LIMACODIDÆ.

17. *Miresa inornata*, ♂, Walk.

♂ Allied to *M. bracteata*, from Darjiling, but more ochraceous throughout, especially upon the primaries, which are also a little shorter and entirely destitute of all the brilliant metallic silver markings of that species; the secondaries are more or less suffused with brownish beyond the middle, and show no trace of the dusky spot upon the fringe towards anal angle, which is present in *M. bracteata*. Expanse of wings 34 mm.

Yokohama, Yamato; feeds on the pear (H. Pryer).

A good figure of *M. bracteata* will be found in the sixth part of "Illustrations of typical Lepidoptera Heterocera," part VI, pl. CII, fig. 2.

The type of *M. inornata* is a large female from N. China.

MICROLEON, n. gen.

Closely allied to *Lithacodes*, of Packard, but with longer and more slender upcurved palpi; the secondaries differing in neuration as follows:—sub-costal branches emitted from a short foot-stalk; discocellulars much more angulated, so that the lower half of the cell is produced forward much in advance of the upper half; the second and third median branches emitted close together; hind legs with four slender spines, two in the middle and two at the end of the tibia.

18. *Microleon longipalpis*, n. sp.

Primaries above bronze-brown; the basal fourth, a clavate streak on inner margin extending from the basal patch to just beyond the middle of the margin, a cuneiform costal patch at apex, and a dot at the end of the cell, orange-ochreous; secondaries sericeous grey-brown; fringes of all the wings whitish-brown traversed by two grey-brown stripes; thorax reddish-orange, abdomen smoky-grey, with golden testaceous anal tuft, with a few dark grey hairs in front; wings below grey, with faint rosy and bronze reflections; fringes paler than above; body pale sericeous golden-brown. Expanse of wings 16 mm.

Yokohama (H. Pryer).

Pryer's note upon this species is incomprehensible to me; he refers it to the genus *Phrixolepia*! and remarks:—"only differs from the former (i.e., *P. sericea*) by being considerably larger." Now, as *P. sericea*, measures 27 millimetres in expanse, and therefore is nearly twice as large; and, as moreover it differs wholly in colour, pattern and structure, I can hardly believe that he has labelled the specimen with its right number, and yet the only other *Limacodid* in the collection is *Miresa inornata*, an insect even more absurdly unlike *P. sericea* than the species before me; had Pryer suggested a resemblance to *Monema flavescens* he would not have been so wide of the mark, as although it differs considerably from that insect in neuration, it has similar palpi and some notion of the colouring.

DREPANULIDÆ.

19. *Argyris superans*, n. sp.

Allied to *A. plagiata*, of Japan, and *A. deliaria*, from Eastern Siberia, but considerably larger, with the ocelloid patch on the primaries perfectly round, enclosing an imperfect circle of unequal black spots separated by the nervures, and in the centre a silver-grey patch, bounded internally by an angular white line and behind by a streak of black scales, it is sprinkled externally with metallic silver scales; sub-marginal rows of spots as in *A. plagiata*, not confused together as in *A. deliaria*; secondaries nearly as in *A. plagiata*, but owing to their greater size the ocelloid patch is further from the outer margin. Expanse of wings 60 mm.

Yezo (H. Pryer).

Some time since I discovered that the genus *Argyris* had been wrongly located by Guénée in the *Geometridæ*, it being not only structurally closely allied to *Cilix* but even having the same coloration and aspect; since then Mr. Moore has figured and described the larva and imago of a nearly allied genus—*Teldenia** from Ceylon; the larva is similar to that of *Cerura*, but not so large in front, and, in fact, is what one would expect to see in the *Drepanulidæ*; Mr. Pryer, however, in a letter recently received, says of '*Argyris*' *superba* :—"This, as you say, is undoubtedly not a *Geometra*; I immediately captured a lot and hatched the larva (*sic*), and they are very hairy *Bombyciform* larva (*sic*), and do not elevate the last pair of claspers, and are, therefore, not *Drepanulidæ*. I unfortunately could not get them to feed up, as I do not know the right food plant, but I hope to find a full fed larva before the season is over."

In the above remarks Mr. Pryer shows that he has paid little attention to recent labours in the rearing of Lepidoptera, or he would have known that no decision respecting the location of a genus can be founded upon the first stage of a larva; a caterpillar when first excluded from the egg may be covered with hair, but in its last stage may be almost smooth; the larva of *Drepana falcula*, however, is hairy; then again with regard to the habit of elevating the last pair of claspers, it is well known

* A second species referred to this genus by Moore occurs in Darjiling, and so closely resembles a *Corycia* in appearance that I described it as belonging to that genus, and even now am not convinced that the resemblance in colour and pattern in the two species is more than accidental; unfortunately I do not possess the Ceylon species.

that many of the larvæ of *Noctuities* commence life as semi-loopers or as true loopers, losing the *Geometrid* character as they advance towards the pupal stage; a character of this kind is of far more importance than the mere elevation of the anal claspers.

Once more I may here remark that Mr. Pryer, though an excellent collector, and one to whom I am personally much indebted, is not one in whose breeding experiments I have the greatest confidence; he is so given to jumping to hasty conclusions that it really is not safe to accept his statements as proved facts; he assumes, from the flight of an insect, that it must belong to such and such a tribe, and then, doubtless, he begins to look for "a full fed larva"! Fancy recognizing at a glance the larva of a moth which one has never reared! He says of *Seudyra subflava*: "I think if you could see it *alive*, particularly when at rest, you would not entertain a doubt about its being allied to *Plusia*. I have, I believe, at last succeeded in finding its larva, which is clearly that of a *Plusia*, but strangely it has a resemblance to the larva of *Cocytodes modesta*!" *

The extravagance of such a suggestion as the above, is not apparent to a collector; he finds a Noctuidiform larva, which, after all, he only conjectures to be that of *Seudyra*, and he concludes that the genera *Seudyra* and *Plusia* are one; whereas any student of the Lepidoptera would assure him that, although the Noctuidiform larvæ of the *Agaristidæ* may prove them to have some affinity to the *Noctuities*, their structure in the imago condition shows that they are more nearly allied to the *Castniidæ*; I have long held the opinion that the arrangement of the *Heterocera* should properly commence thus:—*Sphingidæ*, *Cossidæ*, *Zenzeridæ*, *Hepialidæ*, *Castniidæ*, *Agaristidæ*, *Noctuities*, &c.

In thus publishing and commenting upon extracts from Pryer's letter, I do him no wrong; since he either has published, or intends to publish, these views of his in his "Catalogue

* Since the above was sent to press, I have received a second letter from Pryer in which he speaks thus of *S. noctuina*—"I took the larva of this at Ammayama and have also bred *Seudyra subflava* taken near my gardens; there is not the slightest doubt about its being a *Noctua*, and I believe it to be a *Plusia*," he then concludes by proving its relationship to other *Agaristidæ* thus—"it feeds exposed and emits a very strong smell, musky, when disturbed." An outline sketch in his letter represents the usual type of larva of the latter family.

of Japanese Lepidoptera," a work which (situated as Pryer is, far away from all large libraries and collections) he would have been wiser not to have attempted to produce.

I may mention here that '*Argyris*' *superba* should have been referred to Walker's genus *Auzata*; it only differs from the type of that genus in the much longer sub-costal furca in the primaries, the entire, instead of deeply sinuated, character of the secondaries, and in its slightly thicker antennæ, whereas it differs from *Argyris* in both neurulation and antennæ; the following is a new genus:—

CALLICILIX, n. gen.

Wing-form and neurulation similar to *Auzata*; but the antennæ pectinated and tapering, and the palpi slender, erect, and decidedly longer than in *Auzata*; the position of the genus therefore is between the latter and *Macrocilix*.

20. *Callicilix abraxata*, n. sp.

Creamy-white, all the wings with a marginal series of large oval grey-brown spots, and some partly confluent irregular patches tending to form a sub-marginal band; primaries crossed by a broad and somewhat irregular central belt, grey-brown towards costa, and enclosing a spot of the ground-colour, but below the sub-costal vein, dark golden-brown, crossed by pearl-grey veins, with black extremities, and traversed internally by a pale sinuated line; three grey-brown spots across the basal area; two oval spots on the radial interspaces and a third near apex pearl-white; secondaries with a large grey-brown patch from centre of abdominal margin to the middle of the wing, whence it is continued by two unequal spots to costa; a small spot near base of interno-median area; four pearl-white spots on the disc between the sub-median and radial veins; head black, antennæ brown; thorax cream-colour; abdomen yellowish, with two dorsal series of grey-brown spots; wings below with markings more confluent than above, costal area golden-brownish; central belt paler than above, greyer, not broken by bicolored veins or a pale line; body below ochreous, venter with small blackish lateral spots. Expanse of wings 44 mm.

Yezo, Nikko (H. Pryer).

Has somewhat the aspect and altogether the coloration of an *Abraxas*.

BOMBYCIDÆ.

21. *Prismosticta hyalinata*, n. sp.

♂ Allied to *P. fenestrata*, from Darjiling (of which I only know the female) but differing besides its small size and pectinated antennæ, in the uniform darker brown colour of the primaries, in the oblique black spot at the end of the cell, in the elongated hyaline sub-apical spot, rounded internally and notched externally, and with a small hyaline dot obliquely beyond it; the secondaries have the paler costal area replaced by bright clear ochreous, and the diffused paler ochraceous anal patch by bright golden ochreous, whilst the remainder of the wing surface is darker and the lines are more oblique and black. Expanse of wings 30 mm.

Nikko (H. Pryer).

This may, of course, turn out to be the male of *P. fenestrata*, but it seems hardly probable considering the differences in pattern; its general aspect is that of a gaily coloured *Orgyia*.

22. *Andraca gracilis*, n. sp.

♀ Allied to *A. trilochoides*, from Darjiling; smaller, of a narrower more elegant form; more uniformly coloured; primaries pale foxy red-brown with a pink gloss, with the three darker angular oblique lines and black discocellular dot of the Indian species; a foxy red-brown external diffused border; secondaries with costal half pale testaceous, shading into foxy red-brown towards the abdominal border; fringe brown and white; a minute brown discocellular spot; body dull reddish testaceous; the back of the head and the antennæ white; under-surface glossy golden testaceous, with two reddish-brown discal lines as in *A. trilochoides* but paler; discocellular dots also red-brown. Expanse of wings 46 mm.

Nikko (H. Pryer).

The smaller size, paler colouring and absence of all pearly shades and markings readily distinguish this from the Indian species.

NOTODONTIDÆ.

23. *Drymonia circumscripta*, n. sp.

♂ Unlike the known species of *Drymonia* in pattern, though agreeing with them structurally; primaries white, densely irrorated with red-brown and grey, which gives the whole ground

colour a pale lilacine-brown appearance; basal third pale green, bounded externally by a dentate-sinuate inwardly black-edged white stripe; crossed from base of costa almost to sub-median vein by a curved white band, intersected by a red-brown line; reniform spot white, externally diffused; a broad diffused olive-green patch extending almost to the costal margin, beyond the cell, continued as a very irregular stripe to the external angle; two black dentate-sinuate lines, enclosing five more or less hastate white spots, cross the outer half of the olivaceous patch, the outer black line being continued as an inner boundary to the irregular green stripe which runs to external angle; a widely sinuated sub-marginal white stripe; external border a little browner than the rest of the wing; a marginal series of sub-confluent black spots, followed at the base of the fringe by a whitish line; secondaries smoky-brown, crossed beyond the middle by a paler stripe; antennæ white, with grey-brown pectinations; thorax pale brownish, greenish in the centre, the collar and tegulae striped with black; abdomen greyish-brown; primaries below smoky-brown; secondaries paler but with a spot at the end of the cell and an arched discal band (broadly bordered with white) of an equally dark tint; all the wings with a dark brown marginal line, followed by a white line at the base of the fringe; pectus whitish; venter pale brown. Expanse of wings 38 mm.

Nikko (H. Pryer).

The pattern of the wings in this species reminds one rather of *Notodonta* than *Drymonia*, but the short broadly pectinated antennæ, the neurulation and the absence of the scaled prominence near the base of the inner margins of primaries at once distinguish it.

24. *Lophopteryx ladislai*, Oberthür.

Allied to *L. cucullina*, of Europe, considerably larger, the primaries of a fleshy sienna tint; the costa grey, spotted throughout with black and white; the interno-discal area rather redder and darker than the sub-costal and discoidal areas, crossed obliquely from inner margin just above the prominence to third median branch by two parallel undulated lines, the outer one widest, and commencing with a white lunule; a curved black streak bounding the front of the third median branch, but interrupted as it reaches the white border, which is of a pure chalk-white colour, with black and blackish marking (not red-brown and grey); fringe white, spotted with black; secondaries greyer

than in *L. cucullina*, fringe white, spotted with grey; a wavy white discal line; anal markings pure black and white; head black in front, snow-white behind; antennæ red-brown, the pectinations fringed with white pencils; thorax rufous, abdomen pale tetsaceous; primaries below grey, secondaries cream-coloured; fringes white with dark-grey spots; costa of primaries cream-coloured spotted with black, anal angle of secondaries grey; other markings very indistinct; pectus blackish in front, otherwise white, legs with white-banded black tarsi; anterior legs black, white at all the joints, other legs smoky grey-brown; venter silvery whitish. Expanse of wings 43 mm.

Wada togè, 1st August, 1881 (G. Lewis).

The antennæ are short and pectinated in the male, not long and filiform as represented by M. Oberthür; the inattention of the artist to these important details in M. Oberthür's plates renders the identification of his genera very difficult; if his *Pulodontis* really has filiform antennæ in the male the genus may stand, whereas in my opinion this sole generic character distinguishing it from *Spatalia* is due to the artist; we possess very similar species belonging to the latter genus.

25. *Rosama macrodonta*, n. sp.

♂ Allied to *R. strigosa* of Java, but larger and more nearly of the form of *Spatalia*; primaries pearl-grey irrorated with cupreous red which gives them a fleshy tint; costal area whitish in front, brownish behind, and emitting a pointed brassy-yellow sub-apical streak to outer margin; the whitish portion is also interrupted at the end of the cell by a squamose rufous spot, and does not extend to apex; basi-internal and median areas golden-yellow, densely irrorated with blood-red, and interrupted by central and terminal patches of this colour; the large quadrate internal prominence reddish; a discal abbreviated reddish streak or band divided in the centre by the sub-apical longitudinal streak; a submarginal series of reddish lunules forming the inner margins of cupreous rounded spots; fringe of reddish mingled with white scales; secondaries pale greyish-brown; head and thorax dark red-brown, collar grey, abdomen grey-brown; under-surface of primaries greyish-brown, with coloured borders; secondaries cream-coloured, with an indistinct darker arched band beyond the middle; body below cream-coloured, the upper-surface of the legs and the palpi cupreous red. Expanse of wings 43 mm.

♀ Smaller and yellower in tint than the male. Expanse of wings 37 mm.

♂ Japan (Lewis); ♀ Pekin.

This species is readily separable from *Spatalia*, apart from the shorter broader form of its primaries, by the fact that both sexes have pectinated antennæ.

Owing to the inaccuracy of Bremer's figures, which appear to be taken, for the most part, from shockingly worn specimens, I find that I have redescribed his so-called *Harpyia ocypete* as *Fentonia lævis*; since, however (as Staudinger evidently supposed), the two species are types of widely distinct genera, the name *Fentonia* will stand for Bremer's species.

In addition to the above-mentioned *Sphinges* and *Bombyces*, Mr. Pryer sent the following:—

Sphinges—*Ampelophaga rubiginosa*, Bremer.

Hyloicus davidis, ♂ ♀, Oberthür.

Clanis bilineata, Walker (a small pallid ♂ specimen).

Bombyces—*Spilarcia bifasciata*, ♀, Butler (the black bands wider and more widely separated than in the type).

Sinna fentoni, Butler.

Herr Snellen, in a recent part of the *Tijd. voor Ent.*, has noted this as a synonym of *Teinopyga reticularis*, Feld., but in this my excellent friend has made a mistake, arising from the fact that our series is not before him; the true synonymy is as follows:—

1. *Sinna calospila*, Walk.

syn. *Teinopyga haemacta*, Snellen. Java.

Two specimens in the British Museum collected by Dr. Horsfield.

2. *Sinna extrema*, Walk.

syn. *Teinopyga reticularis*, Feld. Shanghai.

Three specimens in the Museum collection.

3. *Sinna fentoni*, Butler.

Токеи, Japan.

I have three specimens before me differing constantly from the Chinese species in their more sulphur tinted primaries, the markings on which are less orange and more slender, and all the black spots considerably smaller; the secondaries instead of being of a pure silvery-white colour are tarnished and the borders and fringe decidedly brownish.

4. *Sinna clara*, Butler.

Токеи, Japan.

Although from the same locality as the preceding, this is so dissimilar that I do not for a moment doubt its distinctness.

Charotriche niponis, Butler.

The specimen now sent is a fresh male, and shows that my type is decidedly under-coloured; the yellow costal band extending only to just beyond the cell and of a bright chrome-yellow, enclosing a black discocellular spot; the fringes of all the wings straw-yellow; the abdomen blackish, with yellow anal tuft.

Orgyia thyallina, ♂, Butler (a little redder than the type).

Plateumeta aurea, ♂, Butler (rather worn).

Gastropacha cerridifolia, Felder (much shattered).

Stauropus, sp. (too bad for positive identification).

This is probably the *Harpyia taczanowskii*, of Oberthür.

Fentonia ocypete, Brem. (half a specimen).

Staudinger refers this species with hesitation to the genus *Uropus*, and he is quite right in so doing, as it is perfectly distinct from the type of that genus; the fact of the species being thus displaced, however, led to my redescribing it under the name of *Fentonia laevis* (Bremer's figure being barely recognizable with the insect before you); my generic name therefore will stand.

Pterostoma sinica, Moore (a rubbed male).

Notodonta? monetaria, Oberthür.

Platychasma virgo, Butler.

Hoplitis milhauseri?, Fabricius.

The specimen is certainly a *Hoplitis* and either *H. milhauseri*, or a closely allied species; so far as the pattern can be followed, upon the much worn specimen sent by Mr. Pryer, it corresponds with that of the European species; the insect, however, is much larger than ours and may prove to be distinct.

Callidrepana patrana, Moore (the male).

This species has hitherto only been recorded from Darjiling.

Theophila mandarina, Moore.

Previously only recorded from China.

Of the *Noctuities* forwarded to me by Mr. Pryer for identification, many are imperfect and some so hopelessly smashed and rubbed that even their own relations could not recognize them; nothing probably is harder to identify than a damaged moth, especially if a *Noctua*, *Hyppena*, *Tortrix* or *Tinea*; a moth without antennæ, palpi, or legs, or with the fringes of its wings worn off and the colouring rubbed away, is disguised so that only the most experienced Lepidopterist can hope to guess at its natural position; Mr. Pryer himself believes that some of what he calls my errors have arisen "from worn and single specimens only having been sent to him to identify"; and I may add (without admitting that they are errors) such specimens were sent to him by Mr. Pryer, and by nobody else.

Amongst the unrecognizable specimens in the present series is an insect with the abdomen crushed flat, the wings rubbed and the fringes worn off; which, according to the neururation, must come somewhere near *Polytela*, but differs in its small retracted head; Mr. Pryer calls it a *Nenagria*, a genus with which it neither agrees in colouring, form or structure; but, from such a specimen, I cannot venture to assert that it is a new genus, nor would it be possible to describe it as a new species, though I have little doubt that it is both.

To those who undertake the serious task of identifying genera and species; which is not, as Mr. Pryer imagines, decided by guessing, but by careful and laborious examination of structure,

the most perfect specimens which can be procured, ought in all fairness to be sent; by this, half one's labour might be saved, the new species would be represented by presentable types instead of disfigurements to the cabinet, and the sender would have the satisfaction of knowing that he had done to others as he would that they should do to him.

CYMATOPHORIDÆ.

Thyatira flavida, n. sp.

Primaries above brownish-grey, sericeous, with five unequal yellowish-centred black-edged white patches, the largest at base, the next largest at apex, two semi-circular, of about equal size, one just beyond the centre of costa, the other at external angle, the fifth narrow and elongated upon the inner margin; secondaries sericeous straw-yellow, clouded with grey beyond the middle; a tolerably broad dark grey sub-marginal band tapering towards the anal angle; head and collar grey; thorax white, the tegulae sub-quadrate, slightly yellowish at their inferior angles; abdomen whitish-brown; under-surface pale sericeous yellow, primaries clouded with grey, especially towards outer margin, excepting a clear apical costal patch; all the wings with dark grey disco-submarginal band. Expanse of wings 44 mm.

Hakodatè, August 28th (G. Lewis).

Intermediate in the character of the primaries between *T. batis* and *T. pryri*.

Asphalia punctigera, n. sp.

Nearly allied to *A. arctipennis* (*Xylina arctipennis*, Butler); wings a little broader and more pointed at apex; primaries silvery-grey, with a broad central darker belt occupying more than a third of the costa but narrowing to half its width at inner margin, the inner edge of this belt oblique and angular, the outer edge oblique, slightly inarched but ill-defined; discoidal spots small but stone-whitish, with blackish margins; two parallel zigzag pale discal stripes, the outer one limiting the dark external border, which is rather narrow and tapers at the extremities; secondaries pale greyish, slightly darker towards outer margin; fringe whitish, traversed by a grey stripe; thorax dark grey, abdomen paler; under-surface silvery-grey, the primaries, especially within the cell, darker than the secondaries, with four little oblique black costal dashes beyond the cell; pectus whitish. Expanse of wings 42 mm.

Hakodatè (G. Lewis).

APAMIIDÆ.

Xylophasia incognita, n. sp.

Nearly allied to *X. lithoxylea*, of Europe, but smaller, with slightly narrower wings; primaries ash-grey, with smoky-grey markings; the zigzag arched post-median band rather wider than in *X. lithoxylea*; the marginal border a little narrower and partly bounded internally by <-shaped blackish markings; secondaries uniform, pale greyish-brown; body greyish, especially in front; the collar with two converging black dashes at the back; under-surface uniform greyish-white. Expanse of wings 41 mm.

Yesso, 1882 (H. Pryer).

In coloration this species corresponds more nearly with the Chilian *X. cauquenensis* than with *X. lithoxylea*, but in pattern it scarcely differs from the latter

Nephelodes datanidia, n. sp.

Primaries golden-brown; the basal area pale, crossed by a pinky-white angular stripe and bounded externally by a nearly straight transverse stripe of the same colour which borders the central belt; a third narrower stripe borders the central belt externally; the belt itself is of the ground-colour, but with darker margins and a darker patch beyond the cell; external border greyish, pink tinted, preceded by a series of ill-defined dusky spots; fringe cupreous; secondaries pale golden-brown with pink-tinted fringes; thorax dark rufous-brown; abdomen sericeous greyish-brown; under-surface pale golden-brown, the borders of the wings and the body tinted with pink; primaries with the central area greyish, fringe tipped with blackish; secondaries with a dusky lunate spot at the end of the cell, followed by a slightly angulated grey discal stripe. Expanse of wings 30 mm.

No exact locality given; probably Yokohama.

Miana falsa, n. sp.

At first sight much like a large example of the pale banded form of *M. strigilis*, but the central dark belt of primaries considerably wider, commencing at basal fourth; enclosing the discoidal spots which are white-edged, the reniform spot forming the letter B in white; the outer edge of the central belt irregularly zigzag, not denticulated, the white discal band narrow,

diffused and only extending above the median vein as a white edging to the central belt; the external area brown with the white sub-marginal line much more irregular; marginal dots and fringe similar; secondaries much paler, of a silvery grey-brown colour; under-surface much like that of *M. strigilis*, excepting that the secondaries are crossed by one sharply defined deeply dentate-sinuate line, instead of two narrow arched stripes. Expanse of wings 27 mm.

Yokohama?

The number on this insect (857) is evidently incorrect; the ticket must have been placed on the wrong specimen by Mr. Pryer.

Apamea repetita, n. sp.

Pattern of *A. indocilis* (*Xylophasia indocilis*, Wlk.), from New York, and nearly that of *A. conciliata*, from Japan; but the primaries differing from both in their red-brown colour, in the whiter reniform spot and discal band; the secondaries in their pale silvery-brownish colour (like that of *A. ophiogramma*, of Europe); under-surface pale silvery-brownish, or silvery-whitish, with golden reflections; the secondaries with an indistinct dusky disco-cellular spot. Expanse of wings 34 mm.

No exact locality recorded; probably Yokohama.

The arrangement of the markings on the upper surface of the primaries is so like that in *A. conciliata* (Ill. Typ. Lep. Het. II. pl. xxix, fig. 3) that I have not thought it worth while to describe it here, the coloration is, however, very different, and the pale discal band, broader and clearer than in *A. dumerilii*, the pale secondaries and the absence of markings on the under-surface at once distinguish it.

NOCTUIDÆ.

Triphænopsis cinerescens, n. sp.

Primaries having precisely the appearance of those of *Mamestra arctica*, of N. America, but in reality only differing from those of *T. lucilla* in their more triangular shape, in the pearl-grey suffusion on the basal area, the stone-coloured discoidal spots, the ash-grey discal belt and pale ash-grey speckled external border; secondaries paler throughout than in *T. lucilla*,

the orange central patch replaced by a smaller pale straw-coloured patch; under-surface of primaries shining greyish bronze-brown, with the basi-costal border, a diffused spot at the end of the cell and the external border, whitish-brown; secondaries whitish-brown, with golden reflections; a dot at the end of the cell and a disco-submarginal belt blackish. Expanse of wings 46 mm.

Fujisan (H. Pryer).

CATOCALIDÆ.

Catocala sancta, n. sp.

♂ Intermediate between *C. dissimilis* and *C. actæa*; primaries above grey, tinted here and there with lilacine, the costal two-thirds also irrorated with whitish, three oblique zigzag lines of velvet-black across the basal third, the second and third filled in (so as to form an oblique black band) from costa to just below median vein; an elongated oval snow-white spot in the cell and a broader white spot, only separated from it by the median vein, at the base of the first median interspace; below the latter again is a large elongated velvet-black patch, on the interno-median area, extending to the discal line; two ill-defined black irregular streaks extend downwards from costa to end of cell; discal black line of the usual zigzag type (as in *C. lara*) and bounded externally at centre of disc by a large pyramidal white spot; several longitudinal black dashes extending outwards to the white-edged black sub-marginal dots; apex and fringe brownish; secondaries with the basi-abdominal half brown but the apical half blackish; an abbreviated tapering snow-white band from costa as in *C. actæa*, but shorter; a white apical spot as in *C. dissimilis*; a whitish dot on interno-median area not far from outer margin nearly as in *C. actæa*; fringe varied with white; body and under-surface of wings nearly as in the latter species excepting that both blackish and white bands are more angular, and the base of the wings is not bluish. Expanse of wings 55 mm.

Yesso, 1882 (H. Pryer).

This is one of Mr. Pryer's most beautiful discoveries, and really an important one, as tending to show how *C. actæa* is connected with the N. American types of black *Catocala*; a link between *C. actæa* and the *C. fraxini* group still remains to be discovered.

Catocala duplicata, n. sp.

Nearly allied to *C. amasia*, Sm. Abb., from Georgia,* larger; primaries of the same general colour and pattern, of a pale ash-grey, varied with greenish and pale buff; the basal two-sevenths darker, with irregularly excavated outer edging partly bounded by black lines; the central area little darker than in *C. amasia*, but with the same annular arrangement of black dots round the dusky reniform spot and with the same black spots on the costa above it; the external area is wider than in *C. amasia*, and is not bounded internally by a reddish clay-coloured band, but by two less angular zigzag black lines upon a sordid background; half-way between this pair of lines and the outer margin is a deeply dentated black line; a marginal series of black and white dots, alternating with dusky spots on the fringe; secondaries orange-ochreous, with black markings differing from those of *C. amasia* as follows: the abdominal area is less sordid, the inner blackish streak being only represented by a short terminal dash, and the external border gradually tapers from costa to anal angle without interruption; the body is darker than in the American species; below the differences are more marked, the basal area of primaries being obliquely crossed by a broad black band cut by the median vein; the black post-median band is arched and broader, the external border is uniformly blackish, excepting at apex, where it is browner; but there is not a white apical spot either on primaries or secondaries, in fact the latter wings are almost the same as above; the body below is altogether yellow, the venter being of a pale sericeous golden-testaceous colour. Expanse of wings 49 mm.

Japan (H. Pryer).

No exact locality is given for this species.

EREBIDÆ.

Sypna astrigera, n. sp.

♂, ♀ Above scarcely separable from *S. punctosa*, of Darjiling, but with a prominent creamy-whitish reniform spot; primaries smoky-brown, with a purplish gloss; two whitish-edged black dentate-sinuate lines across the basal area; orbicular spot minute, white, with black edge; a dusky dentate-sinuate stripe crossing the wing between the two discoidal spots; reniform

* The species figured by Abbot is certainly that labelled *C. cordelia*, H. Edw., in the Grote collection; that labelled *C. amasia* being a far more beautiful species.

spot D-shaped, surrounded behind by a semicircle of white dots; a lunulated angular black line beyond the middle, its outer edge margined with white in the male; beyond this line the ground-colour becomes paler, with the exception of a central sinuous discal band, bounded externally by a very irregular black line, the costal extremity of which is white-edged internally; external border dark; a sub-marginal series of white-edged black dots; fringe traversed by a dark stripe; secondaries paler, bronzy-brown; similarly marked to *S. achatina*; wings below as in *S. fumosa*, of Japan, but the blackish line beyond the cell much more slender and strongly angulated. Expanse of wings 48-50 mm.

♂, ♀ Nikko, June, 1880; ♀ Chiuzenji, 21st August, 1881 (G. Lewis).

A much shattered female from Nikko was also sent home by Pryer, who mistook it for a *Mania*, in spite of its resemblance to *Sypna fuliginosa* and *S. fumosa*; yet he wishes me to believe that the two latter are varieties of *S. picta* and *S. achatina*; that the same species should have four different types represented in both sexes, and far more nearly resembling Indian species than one another, that these four forms should also be produced simultaneously in about equal numbers (as some of the collections which I have examined show that they must have been) is to me one of the most extraordinary guesses ever made by a collector; in the Museum we do not retain long series of a species unless it is either variable or has a wide range, but nevertheless we have two pairs of *S. fuliginosa*; five *S. fumosa* (two ♂, three ♀); eight *S. picta* (five ♂, three ♀); five *S. achatina* (two ♂, three ♀); these numbers, however, represent only a tithe of the specimens which I have examined, and which I suppose would amount to something like 500 in all; yet in no single instance have I met with an intergrade between the four Japanese types; that *S. fumosa* may be a variety of *S. fuliginosa* I can believe, but that *S. picta*, and *S. achatina* have anything to do with them, I consider quite out of the question and all of a piece with the suggestion that the most distinct representative types of *Terias*, such as *T. brenda*, *sari*, *sinensis* and *mandarina*, are varieties of *T. hecabe*, a notion which, were it a fact, would necessitate our regarding the entire genus as represented by about two species, one from the Old and New Worlds and the other from the New World only; indeed I am doubtful whether these could be maintained for many years even if the genus itself should remain.